

## ACWUA Regional Benchmarking Program (ACWUA-RBM)

### Program Description:

Within the activities of the regional ACWUA WANT project supported by GIZ, and building on ACWUA benchmarking technical working group (BM-TWG) kick-off meeting in Algeria; the BM-TWG agreed on the vision, mission, expected tasks, methodology and approach.

***Vision:*** *Optimizing performance of Water and Wastewater Utilities in the Arab Region through Benchmarking applications and other performance improvement tools.*

***Mission:*** *Applying of Benchmarking according to international good practices towards Performance Improvement of Water and Wastewater Utilities in ACWUA members.*

As a result; the group agreed to work on a pilot benchmarking program (ACWUA-RBM) for ACWUA utility members following the international best practices of benchmarking for water and wastewater utilities. During group meeting in April 2015, it was agreed that ACWUA-RBM will focus on the followings aspects:

- *Overall Utility Performance*
- *Non-Revenue Water*
- *Energy Efficiency*

The list below illustrates the Performance Indicators to be collected and analyzed from all utilities participating in ACWUA-RBM:

### **Energy Efficiency**

<b>Utility level EE indicators</b>
energy content per authorized consumption (kWh/m <sup>3</sup> )
energy content per volume billed (kWh/m <sup>3</sup> )
energy content per volume produced (kWh/m <sup>3</sup> )
Proportion of pumping energy (%)
electrical energy cost (Dollar/kWh)

<b>Pumps level EE indicators</b>
<b><i>well pumps</i></b>
standardized energy consumption abstraction/intake pumps
energy consumption abstraction/intake pumps
<b><i>raw water booster pumps</i></b>
standardized energy consumption
energy consumption
<b><i>treatment pumps</i></b>
standardized energy consumption
energy consumption
<b><i>drinking water main pumps</i></b>
standardized energy consumption
energy consumption
<b><i>drinking water booster pumps</i></b>
standardized energy consumption
energy consumption

<b>Treatment process EE indicators</b>
overall plant energy consumption per intake volume
overall plant energy consumption per volume produced

### **Overall utility performance**

<b>1- O&amp;M indicators</b>
Mains rehabilitation
Service connection rehabilitation



Mains failures
Service connection failures
Power failures
Tests carried out

<b>2- Financial indicators</b>
<b>Cost related</b>
Unit Total costs /Authorized consumption
Unit Total costs /production
Unit running costs / Authorized consumption
Unit running costs / Production
<b>Running Costs related</b>
Salaries (Internal manpower cost)
Electrical Energy cost
<b>Efficiency related</b>
Total cost coverage ratio
Total cost coverage ratio
Operating cost coverage ratio
Operating cost coverage ratio
Payments ratio
Billing efficiency

<b>3- HR indicators</b>
Employees per connection
Employees per customer
Total training
Certification training
Employees per water produced
Employees per water billed

<b>4- Service Quality indicators</b>
Continuity of supply
Quality of supplied water
Service complaints per customer
Billing complaints and queries per customer



Other complaints and queries per customer
Total complaints
Population coverage with service connections
Population coverage with public taps or standpipes

### **Non-Revenue Water**

<b>Overall</b>
Non-revenue water
Water losses
Water losses per connection
Water losses per customer
Water losses per km
Bulk metering ratio by number
Bulk meter coverage

<b>NRW-Real Losses</b>
Mains failures- <i>Same as in Corporate Level**</i>
Service connection failures- <i>Same as in Corporate Level**</i>
Percentage of network covered by ALC
Percentage of connections covered by ALC

<b>NRW-Apparent Losses</b>
Customer metering ratio
Percentage of customer meters tested for accuracy (using standardized test)
Disconnection ratio of illegal uses
Percentage of dormant connections inspected
Percentage of estimated meter reading for metered customers
Percentage of billed metered consumption metered
Meter reading efficiency (%)
Reading audit size



Meter Failure (%/year)
Inactive accounts ratio

<b>NRW-Unbilled</b>
Public taps consumption ratio
Unbilled utility consumption ratio
Percentage of metered consumption billed
Unbilled authorized ratio

ACWUA-RBM will utilize ***aquabench online software*** for data acquisition and data analysis. The technical team from ACWUA secretariat will be responsible on managing ACWUA-RBM within the support of the BM-TWG to help in them in promoting this benchmarking exercise, and invite water utilities from different Arab countries to join the first regional benchmarking exercise in the Arab region.

For utilities willing to join ACWUA-RBM benchmarking exercise, you are kindly advised to fill in the registration form and send it to:

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